

ABSTRACT

A multilayer dielectric substrate includes a first signal via, a second signal via, an internal-layer signal line, an internal-layer ground conductor, and ground vias. The first signal via is connected to a bias-and-control-signal terminal of a high-frequency semiconductor, and is arranged within a region corresponding to the electromagnetic shielding members. The second signal via is arranged outside the region, and is connected to an external terminal for a bias and control signal. The internal-layer signal line connects between the first and the second signal vias. The internal-layer ground conductor is arranged around the first and the second signal vias and the internal-layer signal line. The ground vias are arranged around the first and the second signal vias and the internal-layer signal line, on the internal-layer ground conductor. A resistance film is provided on at least one of an upper surface and a lower surface of the internal-layer signal line.